



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/160,581	09/25/1998	RYUICHI ISHIKAWA	0041-0619-3	6525

22850 7590 05/21/2003

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

PRONE, JASON D

ART UNIT	PAPER NUMBER
----------	--------------

3724

DATE MAILED: 05/21/2003

53

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/160,581	ISHIKAWA ET AL.
	Examiner Jason Prone	Art Unit 3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 28 April 2003.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.
- 4) Claim(s) 17-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 17-25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 September 1998 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                          | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                 | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the blade heater of claim 20 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

2. The specification is objected to under 37 CFR 1.71, as being confusing and difficult to comprehend the invention and compare with prior art. For example, the following items are not understood: The equation is  $\beta \leq -253\alpha + 65$  unclear. First, it is not understood how the speed  $\beta$  can have a negative value and, second, it is not clear what the thickness of a blade has to do with speed. It is unclear how the speed reduction gears are meshed together by the trigger lever. Also, it is not understood how the two speed reduction gear become unmeshed. See the rejections under 35 USC § 112, first paragraph for more details

Applicant is required to submit an amendment which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.

Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 17-25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

On page 3 lines 8-11, the equation  $\beta \leq -253\alpha + 65$ . It is unclear how the speed can be a negative value.

Starting on page 7 line 17, first, it is not clear how the speed reduction gears are meshed together by the trigger lever. It is uncertain which way or about what the trigger lever rotates. Also, it is not understood how the two speed reduction gear become unmeshed. Next it is unclear what the "protruding provided on the speed reduction gear" is. All items that are mentioned in the specification and are in the drawing must be labeled for clarity. Next, it is not clear how the two speed reduction gears are meshed together. It is uncertain if (7) is lifted up, lined up, and then lowered down to mesh with (6) or if (6) is somehow moved. Lastly, it is unclear how the reduction gears would get unmeshed in the first place.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 19 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claim 19, it is unclear how the speed value can be 100mm/min when the thickness is 0.5mm. Plugging 0.5mm in as  $\alpha$ , in the equation  $\beta \leq -253\alpha + 65$ , results in a  $\beta = -61.5$ . If  $\beta$  is dependent upon  $\alpha$ , it is unclear where the value of 100mm/min for speed comes from.

In regards to claim 25, it is not clear how the speed reduction gears are meshed together by the trigger lever. It is uncertain which way or about what the trigger lever rotates. Also, it is not understood how the two speed reduction gear become unmeshed. Next it is unclear what the "protruding provided on the speed reduction gear" is. All items that are mentioned in the specification and are in the drawing must be labeled for clarity. Next, it is not clear how the two speed reduction gears are meshed together. It is uncertain if (7) is lifted up, lined up, and then lowered down to mesh with (6) or if (6) is somehow moved. Lastly, it is unclear how the reduction gears would get unmeshed in the first place.

#### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 17, 18, and 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Burns.

Burns discloses the invention including moving a cutting blade (20) to transit a center portion of the work piece (Figs. 6-8), preventing acceleration of the cutting blade after the cutting transits the work piece (Fig. 8), a cutting blade holder (42), a work piece supporter (16) configured to support the work piece so as to position it perpendicular to the cutting blade (Fig. 2), that the speed of movement of the cutting blade is constant (Figs. 6-8), a speed reduction device (10) configured to receive and reduce a drive force (Figs. 3 and 4), a drive force transmission device configured to transfer the drive force from the speed reducing device to the cutting blade (Fig. 3), that the drive force is provided by a motor (21), that the speed reducing device comprises a plurality of speed reducing gears (25 and 21) configured to reduce a rotational speed (Fig. 3), and that the drive force transmission device comprises a cam configured to rotate along with the rotation of the plurality of speed reducing gears and a cam follower configured to move in a rectilinear direction along with the rotation of the cam (Column 1 lines 35-38 and Figs. 6-8).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burns in view of Kraus. Burns discloses the invention but fails to disclose a blade that is 0.5mm thick. Kraus teaches of a 0.5mm thick blade (Column 2 lines 10-15). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided Burns with a 0.5mm thick blade, as taught by Kraus, for a finer cut.

11. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burns in view of Logan et al. Burns discloses the invention but fails to disclose heating the blade while cutting. Logan et al. teaches of heating the blade while cutting (Fig. 7). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided Burns with heat, as taught by Logan et al., to allow for easier passage of the blade through the work piece.

12. It is to be noted that claim 25 has not been rejected over prior art. It may or may not be readable over the prior art but cannot be determined at this time in view of the issues under 35 USC § 112.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gatto, Walus et al., Heller et al., Long et al., Balyasny, and Benedict et al.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Prone whose telephone number is 703-605-4287. The examiner can normally be reached on 7:30-5:00, Mon - (every other) Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on 703-308-1082. In lieu of mailing, it is encouraged that all formal responses be faxed to 703-872-9302.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.



  
Allan N. Shoap  
Supervisory Patent Examiner  
Group 3700

JP  
May 14, 2003